WHAT IS CLAIMED IS:

1. A currency evaluating device for receiving a stack of currency bills, rapidly discriminating the bills in the stack, and then re-stacking the bills comprising:

an input receptacle for receiving said stack of currency bills to be discriminated;

a transport mechanism for transporting said bills in the direction of the narrow dimension of the bills, one at a time, from said input receptacle to a plurality of output receptacles, at a rate in excess of about 800 bills per minute; and

a discriminating unit for determining the denomination of each of said bills, said discriminating unit including a detector positioned along a transport mechanism path between said input receptacle and one of said a plurality of output receptacles for receiving and re-stacking said bills after being discriminated by said discriminating unit.

2. The currency device of claim 1 further comprising an authenticating unit for determining the genuineness of said bills.

3. The currency device of claim 1 having exactly six output receptacles.

4. The currency device of claim 1 further comprising a counting device for rapidly counting said bills in said stack, said counting device comprising one or more counters keeping track of the value of bills discriminated.

5. The currency device of claim 2 wherein said authenticating unit includes a plurality of magnetoresistive sensors.

6. The currency authenticating device of claim 5 wherein plurality of magnetoresistive sensors are arranged in an array.

7. The currency device of claim 6 wherein plurality of magnetoresistive sensors are arranged in a linear array.

8. The currency device of claim 2 wherein said authenticating unit comprises:

an ultraviolet light source for illuminating said bill to be tested;

an ultraviolet light detector for generating an output signal responsive to ultraviolet light reflected by said bill; and

a signal processor for receiving said ultraviolet detector output signal and determining the genuineness of said bill based upon said output signal.

9. The currency device of claim 8 wherein said output signal is responsive to the presence or absence of ultraviolet light reflected from one or more areas of said bill.

10. The currency device of claim 8 wherein said detector detects a pattern of ultraviolet light reflected by said bill.

11. The currency device of claim 7 wherein said output signal is responsive to the amount of ultraviolet light reflected from one or more areas of said bill.

12. The currency device of claim 2 wherein said authenticating unit comprises:

an ultraviolet light source for illuminating said bill to be tested;

an ultraviolet light detector for generating an output signal responsive to ultraviolet light reflected by said bill;

a visible light detector for generating an output signal responsive to visible light emitted by said bill upon illumination of said bill by said ultraviolet light source; and

a signal processor for receiving said ultraviolet light detector output signal and said visible light detector output signal and determining the genuineness of said bill based upon said ultraviolet light detector output signal and said visible light detector output signal.

13. The currency device of claim 12 wherein said ultraviolet light detector output signal is responsive to the amount of ultraviolet light reflected from one or more areas of said bill and said visible light detector output signal is responsive to the amount of visible light emitted from one or more areas of said bill.

14. A currency discrimination device of claim 2 wherein said authenticating unit comprises:

a detection circuitry for detecting first characteristic information and second characteristic information from a scanned bill;

wherein said discriminating unit generates a first characteristic scanned pattern associated with said detected first characteristic information;

a memory for storing

(1) at least one first characteristic master pattern associated with first characteristic information for each of a plurality of recognizable denominations of genuine bills;

(2) at least one set of genuine second characteristic information for each of said plurality of recognizable denominations of genuine bills; and

a signal processor for

(1) performing a first comparison whereby at least a portion of said scanned pattern is compared with at least a portion of at least one of said master patterns;

(2) determining and indicating the denomination of said scanned bill when said scanned bill is one of said plurality of recognizable denominations or indicating an error based on said first comparison;

(3) retrieving at least a portion of at least one of said sets of genuine second characteristic information corresponding only to the denomination indicated by said first comparison regardless of which of said plurality of recognizable denominations said scanned bill is determined to be based on said first comparison;

(4) performing a second comparison whereby at least a portion of said detected second characteristic information is compared with said retrieved genuine second characteristic information; and

(5) indicating either the genuineness of said scanned bill or an error based on said second comparison.

15. A currency discrimination device of claim 14 wherein said detection circuitry employs at least one detector selected from the group consisting of: optical, magnetic, electrical conductivity, capacitive, and mechanical sensors.

16. A currency counting and evaluation device for receiving a stack of currency bills, rapidly counting and evaluating all the bills in the stack, and then re-stacking the bills, said device comprising:

a input receptacle for receiving a stack of currency bills;

a transport mechanism for transporting said bills, in the direction of the narrow dimension of the bills, from said input receptacle to one of a plurality of output receptacles for receiving and re-stacking said bills after being counted and evaluated at a rate in excess of about 800 bills per minute;

a stationary optical scanning head located between said input receptacle and said plurality of output receptacles for scanning a preselected segment of a central portion of each bill transported by said transport mechanism, said scanning head including at least one light source for illuminating a strip of said preselected segment of a bill, and at least one detector for receiving light from the illuminated strip on the bill and producing an output signal representing variations in the intensity of the received light;

means for sampling said output signal at preselected intervals as a bill is moved across said scanning head in the direction of the narrow dimension of the bill, each of said output signal samples being proportional to the intensity of the light received from a different strip of said preselected segment of a bill;

a memory for storing characteristic signal samples produced by scanning said preselected segments of bills of different denominations with said scanning head and sampling said output signal at said preselected intervals, each of said stored signal samples being proportional to the intensity of the light received from a different strip of said preselected segment of a bill; and

signal processor for receiving said signal samples and (1) determining the denomination of each scanned bill by comparing said stored signal samples with said output signal samples produced by the scanning of each bill with said scanning head, (2) counting the number of scanned bills of each denomination, and (3) accumulating the cumulative value of the scanned bills of each denomination.

17. The currency counting and evaluation device of claim 16 further comprising an authenticating unit for determining the genuineness of the bill.

18. The currency counting and evaluation device of claim 16 wherein said preselected segment of each bill is located in the central region of the bill.

19. The currency counting and evaluation device of claim 16 wherein said transport mechanism forms a linear path for said bills on the upstream side of said plurality of output receptacles, and said scanning head is located along said linear path.

20. The currency counting and evaluation device of claim 16 which includes signal processing means responsive to the output signals from said detector for determining the denomination of each scanned bill before that bill has been advanced to said plurality of output receptacles, and

means responsive to said signal processor for altering the movement of a scanned bill in response to the denomination determination for that bill, before that bill is advanced to said plurality of output receptacles.

21. The currency counting and evaluation device of claim 16 wherein said transport mechanism transports bills, at a rate of at least about 1000 bills per minute.

22. The currency counting and evaluation device of claim 16 having exactly six output receptacles.

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